

APPENDIX

SEQ ID NO:1
5 atg ctg ggc atc tgg acc ctc cta cct ctg gtt ctt acg tct gtt gct aga tta

SEQ ID NO:2 (cecropin pro)
10 GCG CCA GAG CCG AAA

SEQ ID NO:3 (cecropin pro extended)
10 GCG CCA GAG CCG AAA TGG AAA GTC TTC AAG

SEQ ID NO:4 (cecropin prepro)
15 AAT TTC TCA AGG ATA TTT TTC TTC GTG TTC GCT TTG GTT CTG GCT TTG TCA ACA
GTT TCG GCT GCG CCA GAG CCG AAA

SEQ ID NO:5 (cecropin prepro extended)
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SEQ ID NO:6 (pTnMCS)

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	ACAGTAATGG	GCCAATAACA	CCGGTTGCAT	TGATAAGGCT	CACCAATAAT	5100
	CCCTGTAAAG	CACCTTGCTG	ATGACTCTTT	GTTTGGATAG	ACATCACTCC	5150
	CTGTAATGCA	GGTAAAGCGA	TCCCACCACC	AGCCAATAAA	ATTAAAAACAG	5200
60	GGAAAACATA	CCAACCTTCA	GATATAAACG	CTAAAAAGGC	AAATGCACATA	5250
	CTATCTGCAA	TAAATCCGAG	CAGTACTGCC	GTTTTTTCGC	CCATTTAGTG	5300

	GCTATTCTTC	CTGCCACAAA	GGCTTGGAAT	ACTGAGTGTA	AAAGACCAAG	5350
	ACCCGTAATG	AAAAGCCAAC	CATCATGCTA	TTCATCATCA	CGATTTCTGT	5400
	AATAGCACCA	CACCGTGCTG	GATTGGCTAT	CAATGCGCTG	AAATAATAAT	5450
	CAACAAATGG	CATCGTTAAA	TAAGTGATGT	ATACCGATCA	GCTTTTGTTT	5500
5	CCTTTAGTGA	GGGTAAATTG	CGCGCTTGGC	GTAATCATGG	TCATAGCTGT	5550
	TTCCTGTGTG	AAATTGTTAT	CCGCTCACAA	TTCCACACAA	CATACGAGCC	5600
	GGAAGCATAA	AGTGTAAGC	CTGGGGTGCC	TAATGAGTGA	GCTAACTCAC	5650
	ATTAATTGCG	TTGCGCTCAC	TGCCCCGCTT	CCAGTCGGGA	AACCTGTCGT	5700
	GCCAGCTGCA	TTAATGAATC	GGCCAACGCG	CGGGGAGAGG	CGGTTTGCGT	5750
10	ATTGGGCGCT	CTTCCGCTTC	CTCGCTCACT	GACTCGCTGC	GCTCGGTCGT	5800
	TCGGCTGCGG	CGAGCGGTAT	CAGCTCACTC	AAAGGCGGTA	ATACGGTTAT	5850
	CCACAGAATC	AGGGGATAAC	GCAGGAAAGA	ACATGTGAGC	AAAAGGCCAG	5900
	CAAAAGGCCA	GGAAACGTAA	AAAGGCCGCG	TTGCTGGCGT	TTTTCCATAG	5950
	GCTCCGCCCC	CCTGACGAGC	ATCACAAAAA	TCGACGCTCA	AGTCAGAGGT	6000
15	GGCGAAACCC	GACAGGACTA	TAAAGATACC	AGGCGTTTCC	CCCTGGAAGC	6050
	TCCCTCGTGC	GCTCTCCTGT	TCCGACCCTG	CCGCTTACCG	GATACCTGTC	6100
	CGCCTTTCTC	CCTTCGGGAA	GCGTGGCGCT	TTCTCATAGC	TCACGCTGTA	6150
	GGTATCTCAG	TTCGGTGTAG	GTCTTCGCT	CCAAGCTGGG	CTGTGTGCAC	6200
	GAACCCCCCG	TTCAGCCCGA	CCGCTGCGCC	TTATCCGGTA	ACTATCGTCT	6250
20	TGAGTCCAAC	CCGGTAAGAC	ACGACTTATC	GCCACTGGCA	GCAGCCACTG	6300
	GTAACAGGAT	TAGCAGAGCG	AGGTATGTAG	GCGGTGCTAC	AGAGTTCTTG	6350
	AAGTGGTGGC	CTAACTACGG	CTACACTAGA	AGGACAGTAT	TTGGTATCTG	6400
	CGCTCTGCTG	AAGCCAGTTA	CCTTCGGAAA	AAGAGTTGGT	AGCTCTTGAT	6450
	CCGGCAAACA	AACCAACGCT	GGTAGCGGTG	GTTTTTTTTGT	TTGCAAGCAG	6500
25	CAGATTACGC	GCAGAAAAAA	AGGATCTCAA	GAAGATCCTT	TGATCTTTTC	6550
	TACGGGGTCT	GACGCTCAGT	GGAACGAAAA	CTCACGTTAA	GGGATTTTGG	6600
	TCATGAGATT	ATCAAAAAGG	ATCTTCACCT	AGATCCTTTT	AAATTAAAAA	6650
	TGAAGTTTTA	AATCAATCTA	AAGTATATAT	GAGTAAACTT	GGTCTGACAG	6700
	TTACCAATGC	TTAATCAGTG	AGGCACCTAT	CTCAGCGATC	TGTCTATTTT	6750
30	GTTTATCCAT	AGTTGCCTGA	CTCCCCGTCG	TGTAGATAAC	TACGATACGG	6800
	GAGGGCTTAC	CATCTGGCCC	CAGTGCTGCA	ATGATACCGC	GAGACCCACG	6850
	CTCACCGGCT	CCAGATTTAT	CAGCAATAAA	CCAGCCAGCC	GGAAGGGCCG	6900
	AGCGCAGAAG	TGGTCCTGCA	ACTTTATCCG	CCTCCATCCA	GTCTATTAAT	6950
	TGTTGCCGGG	AAGCTAGAGT	AAGTAGTTCG	CCAGTTAATA	GTTTGCGCAA	7000
35	CGTTGTTGCC	ATTGCTACAG	GCATCGTGGT	GTCACGCTCG	TCGTTTGTTA	7050
	TGGCTTCATT	CAGCTCCGGT	TCCCAACGAT	CAAGGCGAGT	TACATGATCC	7100
	CCCATGTTGT	GCAAAAAAGC	GGTAGCTCC	TTCGGTCCTC	CGATCGTTGT	7150
	CAGAAAGTAA	TTGGCCGCAG	TGTTATCACT	CATGGTTATG	GCAGCACTGC	7200
	ATAATTCTCT	TACTGTCTAT	CCATCCGTAA	GATGCTTTTC	TGTGACTGGT	7250
40	GAGTACTCAA	CCAAGTCATT	CTGAGAATAG	TGTATGCGGC	GACCGAGTTG	7300
	CTCTTGCCCC	GCGTCAATAC	GGGATAATAC	CGCGCCACAT	AGCAGAACTT	7350
	TAAAAGTGCT	CATCATTGGA	AAACGTTCTT	CGGGGCGAAA	ACTCTCAAGG	7400
	ATCTTACCGC	TGTTGAGATC	CAGTTCGATG	TAACCCACTC	GTGCACCCAA	7450
	CTGATCTTCA	GCATCTTTTA	CTTTCACCAG	CGTTTCTGGG	TGAGCAAAAA	7500
45	CAGGAAGGCA	AAATGCCGCA	AAAAAGGGAA	TAAGGGCGAC	ACGGAAATGT	7550
	TGAATACTCA	TACTCTTCCT	TTTTCAATAT	TATTGAAGCA	TTTATCAGGG	7600
	TTATTGTCTC	ATGAGCGGAT	ACATATTTGA	ATGTATTTAG	AAAAATAAAC	7650
	AAATAGGGGT	TCCGCGCACA	TTTCCCCGAA	AAGTGCCAC		7689
50	SEQ ID NO:8 (modified Kozak sequence)					
	ACCATG					
	SEQ ID NO:9 (a Kozak sequence)					
	ACCATGG					
55	SEQ ID NO:10 (a Kozak sequence)					
	ACCATGT					
	SEQ ID NO:11 (a Kozak sequence)					
60	AAGATGT					

6/17

TCCCTCGAAC CATGAACACT CCTCCAGCTG AATTTCACAA TTCCTCTGTC
 ATCTGCCAGG CCATTAAGTT ATTCAATGGA GATCTTTGAG GAACACTGCA
 AGTTCATATC ATAAACACAT TTGAAATTGA GTATTGTTTT GCATTGTATG
 GAGCTATGTT TTGCTGTATC CTCAGAAAAA AAGTTTGTTA TAAAGCATTC
 5 ACACCCATAA AAAGATAGAT TTAAATATTC CAGCTATAGG AAAGAAAGTG
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 GATTAGCAGA ACAGGCAGAA AACACATTGT TACCAGAAAT TAAAACTAA
 TATTGTCTCT CCATTCAATC CAAAATGGAC CTATTGAAAC TAAAATCTAA
 15 CCCAATCCCA TTAAATGATT TCTATGGCGT CAAAGGTCAA ACTTCTGAAG
 GGAACCTGTG GGTGGGTCAC AATTCAGGCT ATATATTTCC CAGGGCTCAG

SEQ ID NO:22 (chicken ovalbumin enhancer)
 ccgggctgca gaaaaatgcc aggtggacta tgaactcaca tccaaaggag
 20 cttgacctga tacctgattt tcttcaaact ggggaaacaa cacaatccca caaaacagct
 cagagagaaa ccatcactga tggctacagc accaaggtat gcaatggcaa tccattcgac
 attcatctgt gacctgagca aaatgattta tctctccatg aatgggtgct tctttccctc
 atgaaaaggc aatttccaca ctcaaatat gcaacaaaga caaacagaga acaattaatg
 tgctccttcc taatgtcaaa attgtagtgg caaagaggag aacaaaatct caagttctga
 25 gtagggtttta gtgattggat aagaggcttt gacctgtgag ctcacctgga cttcatatcc
 ttttgataa aaagtgcttt tataactttc aggtctccga gtctttattc atgagactgt
 tggtttaggg acagaccac aatgaaatgc ctggcatagg aaagggcagc agagccttag
 ctgacctttt cttgggacaa gcattgtcaa acaatgtgtg acaaaactat ttgtactgct
 ttgcacagct gtgctgggca gggcaatcca ttgccacctt tcccaggtaa ccttccaact
 30 gcaagaagat tgttgcttac tctctctaga

SEQ ID NO:23 (5' untranslated region)
 GTGGATCAACATACAGCTAGAAAGCTGTATTGCCTTTAGCACTCAAGCTCAAAAGACAACCTCAGAGTTC
 ACC

SEQ ID NO:24 (putative cap site)
 ACATACAGCTAG AAAGCTGTAT TGCCTTTAGC ACTCAAGCTC AAAAGACAAC TCAGAGTTCA

SEQ ID NO:25 (Chicken Ovalbumin Signal Sequence)
 40 ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAGGA GCTCAAAGTC
 CACCATGCCA ATGAGAACAT CTTCTACTGC CCCATTGCCA TCATGTCAGC TCTAGCCATG
 GTATACCTGG GTGCAAAAGA CAGCACCAGG ACACAGATAA ATAAGGTTGT TCGCTTTGAT
 AAACCTCCAG GATTCGGAGA CAGTATTGAA GCTCAGTGTG GCACATCTGT AAACGTTTAC
 45 TCTTCACTTA GAGACATCCT CAACCAAATC ACCAAACCAA ATGATGTTTA TTCGTTTCAGC
 CTTGCCAGTA GACTTTTATGC TGAAGAGAGA TACCCAATCC TGCCAGAATA CTTGCAGTGT
 GTGAAGGAAC TGTATAGAGG AGGCTTGGA CCTATCAACT TTCAAACAGC TGCAGATCAA
 GCCAGAGAGC TCATCAATTC CTGGGTAGAA AGTCAGACAA ATGGAATTAT CAGAAATGTC
 CTTAGCCAA GCTCCGTGGA TTCTCAAAC GCAATGGTTC TGGTTAATGC CATTGTCTTC
 50 AAAGGACTGT GGGAGAAAAC ATTTAAGGAT GAAGACACAC AAGCAATGCC TTTCAGAGTG
 ACTGAGCAAG AAAGCAAACC TGTGCAGATG ATGTACCAGA TTGGTTTATT TAGAGTGGCA
 TCAATGGCTT CTGAGAAAAT GAAGATCCTG GAGCTTCCAT TTGCCAGTGG GACAATGAGC
 ATGTTGGTGC TGTTCCTGA TGAAGTCTCA GGCCTTGAGC AGCTTGAGAG TATAATCAAC
 TTTGAAAAAC TGAAGTGAAT GACCAAGTCT AATGTTATGG AAGAGAGGAA GATCAAAGTG
 55 TACTTACCTC GCATGAAGAT GGAGGAAAAA TACAACCTCA CATCTGTCTT AATGGCTATG
 GGCATTACTG ACGTGTTAG CTCTTCAGCC AATCTGTCTG GCATCTCCTC AGCAGAGAGC
 CTGAAGATAT CTAAGCTGT CCATGCAGCA CATGCAGAAA TCAATGAAGC AGGCAGAGAG
 GTGGTAGGGT CAGCAGAGGC TGGAGTGGAT GCTGCAAGCG TCTCTGAAGA ATTTAGGGCT
 GACCATCCAT TCCTCTCTG TATCAAGCAC ATCGCAACCA ACGCCGTTCT CTTCTTTGGC
 60 AGATGTGTTT CCCCT

SEQ ID NO:26 (Chicken Ovalbumin Signal Sequence - shortened 50bp)

ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAAGGA

SEQ ID NO:27 (Chicken Ovalbumin Signal Sequence - shortened 100bp)
 5 ATG GGCTCCATCG GCGCAGCAAG CATGGAATTT TGTTTTGATG TATTCAAGGA GCTCAAAGTC
 CACCATGCCA ATGAGAACAT CTTCTACTGC CCCATTGCCA

SEQ ID NO:28 (vitellogenin targeting sequence)
 10 ATGAGGGGGATCATACTGGCATTAGTGCTCACCCCTTGTTAGGCAGCCAGAAGTTTGACATTGGT

SEQ ID NO:29 (pro-insulin sequence)
 TTTGTGAACCAACACCTGTGCGGCTCACACCTGGTGGAAAGCTCTCTACCTAGTGTGCGGGGAACGAGGC
 TTCTTCTACACACCCCAAGACCCGCCGGGAGGCAGAGGACCTGCAGGTGGGGCAGGTGGAGCTGGGCGGG
 15 GGCCCTGGTGCAGGCAGCCTGCAGCCCTGGCCCTGGAGGGGTCCCTGCAGAAGCGTGGCATTTGTGGAA
 CAATGCTGTACCAGCATCTGCTCCCTCTACCAGCTGGAGAACTCTGCAACTAG

SEQ ID NO:30 (p146 protein)
 KYKKALKKLAKLL

20 SEQ ID NO:31 (p146 coding sequence)
 AAATACAAAAAAGCACTGAAAAAACTGGCAAAACTGCTG

SEQ ID NO:32 (spacer)
 25 (GPGG)_x

SEQ ID NO:33 (spacer)
 GPGGGPGGPGG

30 SEQ ID NO:34 (spacer)
 GGGGSGGGSGGGGS

SEQ ID NO:35 (spacer)
 35 GGGGSGGGSGGGSGGGGS

SEQ ID NO:36 (repeat domain in TAG spacer sequence)
 Pro Ala Asp Asp Ala

SEQ ID NO:37 (TAG spacer sequence)
 40 Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala
 Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp

SEQ ID NO:38 (gp41 epitope)
 45 Ala Thr Thr Cys Ile Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu

SEQ ID NO:39 (polynucleotide sequence encoding gp41 epitope)
 Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Thr Thr Cys Ile Leu Lys Gly
 Ser Cys Gly Trp Ile Gly Leu Leu Asp Asp Asp Asp Lys

50 SEQ ID NO:40 (enterokinase cleavage site)
 DDDDK

SEQ ID NO:41 (TAG sequence)
 Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala
 55 Asp Asp Ala Pro Ala Asp Asp Ala Pro Ala Asp Asp Ala Thr Thr Cys Ile
 Leu Lys Gly Ser Cys Gly Trp Ile Gly Leu Leu Asp Asp Asp Asp Lys

SEQ ID NO:42 (altered transposase Hef forward primer)
 ATCTCGAGACCATGTGTGAACCTTGATATTTTACATGATTCTCTTTACC

SEQ ID NO:43 (altered transposase Her reverse primer)
GATTGATCATTATCATAATTTCCCAAGCGTAACC

5

SEQ ID NO: 44 GnRH:Phor 11
Met-Glu-His-Trp-Ser-Tyr-Gly-Leu-Arg-Pro-Gly-Lys-Phe-Ala-Ile-Cys-Lys-
Lys-Phe-Ala-Ile-Cys-OCH

10

SEQ ID NO: 45 GNRH/Phor14
EHWSYGLRPGKF~~AKFAKFAKFAKFAK~~

15

SEQ ID NO: 46 Phor14::Beta-LH Sequence
MKFAKFAKFAKFAKSYAVALSCQCALCRR

SEQ ID NO:47 (pTnMCS (CMV-prepro-HCPro-ProLys-LC-CPA))

1 ctgacgcgcc ctgtagcgcc gcattaagcg cggcgggtgt ggtggttacg cgcagcgtga
61 cgcgtacact tgccagcgcc ctgagcgccg ctcctttcgc tttcttcctt tcctttctcg
120 121 ccacgttcgc cggcatcaga ttggctattg gccattgcat acgttgtatc catatcataa
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25 421 atgggtggag tatttacggg taaactgccc cttggcagta catcaagtgt atcatatgcc
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	3061	ctttaaaaaat	aaaaaacaat	tactcagtg	ctgttataag	cagcaattaa	ttatgattga
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	3181	tgaacattat	cttgattata	ttattgataa	taataaaaaa	cttatcccta	tccaagaagt
	3241	gatgcctatc	attgggttga	atgaacttga	aaaaaattga	ccttgaatac	attactggta
	3301	aggtaaacgc	cattgtcagc	aaattgatcc	aagagaacca	acttaaagct	ttcctgacgg
	3361	aatgttaatt	ctcgttgacc	ctgagcactg	atgaatcccc	taatgatttt	ggtaaaaatc
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